



Attorney Docket No. 1046.1185

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of:

Nobuharu IINUMA

Application No.: 09/124,231

Group Art Unit: 2674

Filed: July 29, 1998

Examiner: Jean E. Lesperance

For: DISPLAY APPARATUS INCLUDING SCREEN SAVER FUNCTION

APPEAL BRIEF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

I. Real Party in Interest

The real party in interest is FUJITSU LIMITED. The inventor Nobuharu IINUMA assigned all rights in the subject application to FUJITSU LIMITED on July 9, 1998, according to the Assignment submitted for recordation on July 29, 1998 and recorded at Reel 9365, Frame 0820 on May 4, 2001.

II. Related Appeals and Interferences

There are no related appeals or interferences known to Appellants, Appellants' legal representatives or the Assignee, FUJITSU LIMITED, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-21 are pending and stand rejected under 35 USC § 103(a) and have been more than twice rejected.

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IV. Status of Amendments

No amendments have been made subsequent to the Examiner's rejection mailed January 9, 2006.

V. Summary of Claimed Subject Matter

The present invention is directed to an information processing system and method of controlling a display apparatus 1 connected to a computer main frame 2 (page 12, lines 2-5 and FIG. 1). The computer main frame 2 includes a video RAM (VRAM) 5 storing image (video) data processed in a central processing unit (CPU) 3 (page 12, lines 6-10). The display apparatus includes a memory unit 23 that stores screen protecting image data (including video data), i.e., a "screen saver" program (stored in ROM 26) and a display control unit or graphic processor 25 in flat panel controller 22 (page 13, lines 8-11; and FIGS. 1 and 2) controlling the screen protecting image data during different power consumption modes (page 12, lines 20-25 and page 13, lines 1-18) by transmitting a control signal for changing the operation mode of the main computer apparatus 2 into a low power consumption mode under a predetermined condition (page 14, lines 6-19).

Appealed claim 1 recites a "display apparatus, comprising: a display screen displaying thereon image data sent from a main apparatus" (claim 1, lines 1-2). An example of a display apparatus is illustrated in FIG. 1 as Display Apparatus 1 composed of Display Screen 21, Flat Panel Controller 22, and Memory 23. In this case, the display apparatus is connected to Computer Main Frame 2. "The image data processed in the central processing unit 3 is ... stored in ... VRAM 5 under control of the graphic controller 4 of the computer main frame 2 ... the image data sequentially outputted from the VRAM 5 are displayed on the display screen 21 under control of the flat panel controller 22" (page 15, lines 11-16).

Claim 1 recites that the display apparatus includes "a memory unit storing therein screen protecting image data" (claim 1, line 3). An example of the memory unit is RAM (memory) 23 shown in FIG. 1 and FIG. 2. Examples of the screen protecting data are described as follows; thus, for "screen protecting image data, any sorts of data displayable on the screen may be used, for instance, character data, still image data, and moving picture [video] image data" (page 6, lines 21-24).

Claim 1 also recites "a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus" (claim 1, lines 4-6). An example of the display control unit is graphic processor 25 in flat panel controller 22 (page 12, lines 6-10; page 13, lines 8-11; and FIGS. 1 and 2). In addition, "graphic controller 4 ... constitutes a main display control unit" (page 12, lines 7-8). As illustrated in FIG. 4 and described on page 17 of the present invention, the screen saver mode on the display screen can be on when the CPU and/or graphics

controller are either in the normal mode (i.e., operational condition) or in the suspend mode (i.e., non-operational condition); therefore, the screen saver mode on the display screen can be on "irrespective of an operation mode of the main apparatus" (claim 1, lines 5-6). According to the description of FIG. 4 at page 16, lines 3-16, "irrespective" of whether the main frame 2 (composed of CPU 3 and graphics controller 4) is operating under a normal condition or the low power consumption condition (i.e., suspend condition), the screen saver mode on the display screen can be on.

Further, claim 1 recites "said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition" (claim 1, lines 6-7). An example of this operation is described in the specification as

when the screen saver is initiated under normal condition, this process operation is directly advanced to step 16. At this step 16, the screen saver driver 27 sends a stop control signal to the computer main frame 2. Upon receipt of the stop control signal, the operation mode of the computer main frame 2 is changed into the low power consumption mode

(page 17, lines 3-9);

when a predetermined input is not entered into the computer at step 10, a control signal is transferred via the GPIO of the graphic controller 4 (step 12). Upon receipt of this control signal, the screen saver driver 27 continuously [activates] the graphic processor 25 of the flat panel controller 22 [and] initiates the screen saver (step 13)

(page 16, lines 15-21).

Appealed claim 4 recites an "information processing system, comprising: a main apparatus processing image data and a display apparatus displaying the image data sent from said main apparatus on a display screen" (claim 4, lines 1-4). An example of the main apparatus is described in the specification as computer main frame 2 and an example of the display apparatus is display apparatus 1 (page 12, lines 6-10 and FIG. 1).

Further, claim 4 recites "said main apparatus includes: an image data storage unit storing image data to be displayed; and a main display control unit causing the image data stored in the image data storage unit to be displayed on the display screen" (claim 4, lines 5-8). An example of the image data stored in the image data storage unit VRAM (video RAM) 5 is image (video) data processed in the central processing unit 3; an example of the main display control unit is graphic controller 4; and an example of the display screen is display screen 21 (page 12, lines 6-10 and FIG. 1).

Further, claim 4 recites "said display apparatus includes: a memory unit storing therein screen protecting image data" (claim 4, lines 9-10). An example of the memory unit storing screen protecting image data is "RAM (memory) 23 for storing screen protecting data ... provided in the display apparatus [1]" (page 13, lines 9-11; FIG. 1 and FIG. 2).

Further, claim 4 recites "a sub-display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on the display screen irrespective of an operation mode of the main apparatus" (claim 4, lines 11-13). An example of the sub-display control unit is the flat panel controller 22 which includes graphic processor 25, screen saver ROM 26 and screen saver driver ROM 27. Controller 22 is described in the specification at page 13, lines 11-16 and shown in FIG. 1 and FIG. 2. Details of how screen protecting image data are displayed are described at page 16, lines 3-16 and illustrated in FIG. 4.

Further, claim 4 recites "said sub-display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition" (claim 4, lines 13-15). As an example, "the screen saver driver 27 sends a stop control signal to the computer main frame 2. Upon receipt of the stop control signal, the operation mode of the computer main frame 2 is changed into the low power consumption mode" (page 17, lines 3-9). The description of the limitation "when a predetermined input is not entered" is as described as discussed above on page 16, lines 15-21.

Appealed claim 6 recites a "display apparatus comprising: a memory unit storing therein screen protecting data" (claim 6, line 2). An example of the memory unit is RAM 23 shown in FIGS. 1 and 2. Examples of the screen protecting data are "any sorts of data displayable on the screen ... for instance, character data, still image data, and moving picture [video] image data" (page 6, lines 22-24).

Further, claim 6 recites "a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on the display screen of the display apparatus irrespective of an operation mode of the main apparatus" (claim 6, lines 3-5). An example of the display control unit is the flat panel controller 22 which includes graphic processor 25, screen saver ROM 26 and screen saver driver ROM 27. Controller 22 is described in the specification at page 13, lines 11-16 and shown in FIGS. 1 and 2. Details of how screen protecting image data are displayed are described at page 16, lines 3-16 and illustrated in FIG. 4.

Further, claim 6 recites "said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a prede-

terminated condition" (claim 6, lines 5-7). An example of the operation of the screen saver driver "when a predetermined input is not entered" is described at page 16, lines 15-21 and page 17, lines 3-9.

Claim 6 further recites "whereby when no access is made from the main apparatus to the display apparatus for a predetermined time period, an image produced from screen protecting image data is displayed on the display screen of the display apparatus" (claim 6, lines 8-10). In an example in the specification, the "display control ... causes the screen protecting image data stored in the memory ... to be represented on the display screen under such a condition that the main apparatus is not actually operated for a preselected time period" (page 14, lines 8-12).

Appealed claim 9 recites a "display apparatus, comprising: a display screen displaying thereon image data sent from a computer main frame, the computer main frame including a central processing unit, random access memory, a graphic controller and video random access memory" (claim 9, lines 1-4). An example of a display apparatus is illustrated in FIG. 1 and described in the specification on page 15, lines 11-16.

Claim 9 also recites "a rewritable memory unit, separate from the random access memory and separate from the video random access memory, storing therein screen protecting image data" (claim 9, lines 5-6). As described in the specification, a computer system "may be arranged as indicated in FIG. 5 ... [where] ... the display control ... 22 ... the screen-saver ... ROMs ... and ... the screen protecting data RAM ... 23 may be formed as a display control apparatus 31 ... physically separated from the display apparatus 1" (page 19, lines 2-8); "the memory ... 23 for storing the screen protecting data is realized as a detachable type memory with respect to the display apparatus" (page 19, lines 14-17); "image data [is] stored in the screen protecting data RAM ... 23" (page 14, lines 21-22). In Fig. 1, "reference numeral 1 denotes a display apparatus of a so-called 'notebook type personal computer' ... connected to a computer main frame" (page 12, lines 2-4) and "a liquid crystal flat display screen 21, a flat panel controller 22, and a RAM ... 23 ... are provided in the display apparatus" (page 13, lines 8-11). As an example "computer main frame 2" illustrated in FIG. 1 includes VRAM 5 (page 12, lines 8-10) and a CPU which includes main memory (page 4, lines 24-25). In this example, RAM 23 is separate from the RAM in the CPU and VRAM both included in the computer main frame.

Claim 9 further recites "a display control unit, separate from the graphic controller, operable to control the screen protecting image data stored in said rewritable memory unit to be displayed on the display screen irrespective of an operation mode of the computer main frame" (claim 9, lines 7-9). As illustrated in FIG. 4 and described on page 17 of the application, the

screen saver mode on the display screen can be on when the CPU and graphics controller are either in the normal mode (i.e., operational condition) or in the suspend mode (i.e., non-operational condition); therefore, the screen saver mode on the display screen can be on "irrespective of an operation mode of the computer main frame" (claim 9, line 9).

Claim 9 also recites "said display control unit transmitting a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition" (claim 9, lines 11-14). An example of the graphic controller is illustrated in FIG. 1 and described in the specification as "a display apparatus of a so-called 'notebook type personal computer' ... connected to a computer main frame" (page 12, lines 2-4), "a liquid crystal flat display screen 21, a flat panel controller 22" (page 13, lines 8-9). In this example, "[t]he computer main frame 2 contains a central processing unit (CPU) 3, [and] a graphic controller 4" (page 12, lines 6-7). As described in the specification, "[u]nder such a condition that the main apparatus is not actually operated, or accessed for a preselected time duration, this main apparatus control means transmits a control signal to the main apparatus" (page 8, lines 2-5).

According to the specification, "[w]hile such a control signal is transmitted, the main control apparatus receives this control signal and can change the normal power consumption mode into the low power consumption mode" (page 10, lines 19-23). In addition, a display control operation causes "the screen protecting image data stored on the memory ... to be displayed on a display screen of the display apparatus under such a condition that a main apparatus is not actually operated for a predetermined time period" (page 10, lines 2-6). "Also, this screen saver driver 27 transmits the control signal to the main apparatus under such a condition that the main apparatus is not actually operated for a preselected time duration" (page 14, lines 12-15). See also page 19, lines 1-12; page 15, line 22 to line 16, line 2; page 16, line 3 to page 17, line 19; page 17, line 23 to page 20, line 22; and the flowchart in FIG. 3, particularly boxes 12-16.

Upon receipt of a stop control signal, the operation mode of the computer main frame 2 is changed into the low power consumption mode (suspend mode), and therefore, at least one of the graphic controller 4 and the central processing unit 3 is stopped (step 17 in FIG. 3). According to the specification, the screen saver is displayed on the display screen on the side of the display apparatus. When this occurs, one or both of the CPU 3 and graphic controller 4 in the computer main frame are stopped, i.e., put into the suspend condition (see page 15, line 22 to page 17, line 2 and the flowchart in FIG. 3, particularly boxes 12-16).

Appealed claim 10 recites a "display system for a portable computer, comprising ... a screen protecting data random access memory, independent from the random access memory

and the video random access memory of said computer main frame, storing screen protecting image data" (claim 10, line 1 and lines 6-8). An example of the portable computer is described in the specification as "a so-called 'notebook type personal computer' ... connected to a computer main frame" (page 12, lines 2-4). The computer system "may be arranged as indicated in Fig. 5 ... [where] ... the display control ... 22 ... the screen-saver ... ROMs ... and ... the screen protecting data RAM ... 23 may be formed as a display control apparatus 31 ... physically separated from the display apparatus 1" (page 19, lines 2-8). Further, "the memory ... 23 for storing the screen protecting data is realized as a detachable type memory with respect to the display apparatus" (page 19, lines 14-17) and "a liquid crystal flat display screen 21, a flat panel controller 22, and a RAM ... 23 ... are provided in the display apparatus" (page 13, lines 8-11).

Claim 10 further recites "a display control unit, independent from the central processing unit of said computer main frame" (claim 10, lines 9-10). An example of the display control unit is illustrated in FIG. 1 and described as "a liquid crystal flat display screen 21, a flat panel controller 22 ... are provided in the display apparatus" (page 13, lines 8-11).

Claim 10 recites that the display control unit is "operable to control the screen protecting image data stored in the screen protecting data random access memory to be displayed on the display screen irrespective of an operation mode of the computer main frame" (claim 10, lines 10-12). An example of the computer main frame is illustrated in FIG. 1 and described as containing "a central processing unit (CPU) 3, a graphic controller 4 which constitutes a main display control ... and a VRAM ... 5" (page 12, lines 6-9). The CPU is described as including main memory (see page 4, lines 24-25).

As illustrated in FIG. 4 and described in the specification, the screen saver mode on the display screen can be on when the CPU and graphics controller are either in the normal mode (i.e., operational condition) or in the suspend mode (i.e., non-operational condition); therefore, the screen saver mode on the display screen can be on "irrespective of an operation mode of the main apparatus" (claim 1, lines 5-6). (See also, page 16, lines 3-16 and FIG. 4).

Claim 10 further recites "said display control unit transmitting a control signal, for changing the operation mode of said computer main frame into a low power consumption mode under a predetermined condition" (claim 10, lines 12-14). An example of a predetermined condition described in the specification is a "predetermined input" associated with either a "normal condition" or a low power consumption mode, i.e., a suspend condition (see page 16, lines 15-21 and page 17, lines 3-9).

Appealed claim 14 recites a "method of controlling a display apparatus, comprising: displaying image data on a display screen sent from a computer main frame, storing screen protecting image data in a screen protecting data random access memory" (claim 14, lines 1-3). An example of the display apparatus is illustrated in FIGS. 1 and 2 and described on page 12, lines 1 and 3; page 12, lines 6-10; page 13, lines 8-11. An example of image data displayed on a display apparatus is described on page 6, lines 21-24; page 8, lines 21-25; page 12, lines 8-10; and page 15, lines 14-21.

Claim 14 further recites "storing screen protecting image data in a screen protecting data random access memory, independent from a random access memory and a video random access memory in said computer main frame" (claim 14, lines 3-5). An example of the "screen protecting data" is illustrated in FIGS. 1 and 2 and described on page 4, lines 24-25; page 12, lines 2-4; page 12, lines 8-10; page 13, lines 8-11 and page 19, lines 14-17.

Claim 14 also recites "displaying the screen protecting image data stored in the screen protecting data random access memory on the display screen irrespective of an operation mode of the computer main frame" (claim 14, lines 6-8). An example of "displaying the screen protecting image data stored in the screen protecting data random access memory on the display screen" is illustrated in FIGS. 1, 2 and 4 and described in the specification, page 8, lines 21-25; page 12, lines 6-10; page 13, lines 8-11 and page 16, lines 3-16.

Claim 14 further recites "transmitting a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition" (claim 14, lines 9-10). An example of this operation is described on page 16, lines 15-21 and page 17, lines 3-9.

Appealed claim 20 recites a "display apparatus for a data processing device" claim 20, line 1). An example of a display apparatus is illustrated in FIG. 1 and described on page 12, lines 1 and 3.

Claim 20 further recites "a display screen displaying image data" (claim 20, line 2) and described on page 15, lines 14-21 and page 12, lines 16-18. An example of image data displayed on a display apparatus is described on page 6, lines 21-24; page 8, lines 21-25; page 12, lines 8-10; and page 15, lines 14-21.

Claim 20 also recites "a memory storing screen protecting image data" (claim 20, line 3). An example of screen protecting image data is illustrated in FIGS. 1 and 2 and described as on page 6, lines 21-24.

Claim 20 further recites "a display controller causing the screen protecting image data stored in said memory unit to be displayed on said display screen" (claim 20, lines 4-5). An example of the display controller is illustrated in FIGS. 1 and 2 and described on page 12, lines 6-10 and page 13, lines 8-11.

Claim 20 also recites "transmitting a control signal to the data processing device to place the data processing device in an energy saver mode under a predetermined condition" (claim 20, lines 5-7). An example of this operation is described on page 16, lines 15-21 and page 17, lines 3-9.

VI. Grounds of Rejection to be Reviewed on Appeal

Claims 1-21 were rejected under 35 USC § 103(a) as unpatentable over Kanno (US 5,602,567) in view of Vossler (US 6,246,397).

VII. Argument

The January 9, 2006 Office Action erred in rejecting claims 1-21 under 35 USC § 103(a) as unpatentable over Kanno (US 5,602,567) in view of Vossler (US 6,246,397), because the applied references fail to teach or suggest all the claim limitations of each independent claim and each dependent claim of the present invention.

It is well settled in the law that to establish a *prima facie* case of obviousness, three basic criteria must be met

(1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success ... [and (3)] Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure

(*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 at 1442 (Fed. Cir. 1991)).

Appealed claim 1 recites

a memory unit storing therein screen protecting image data; and a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus, said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition

(claim 1, lines 3-8). The January 9, 2006 Office Action cited Kanno as disclosing a "monitor control unit, Fig. 1 (14) which includes a RAM (12) operable to control the screen image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus Fig. 1 (1)" (Office Action, page 2, line 21 to page 3, line 1).

However, in Kanno, "computer 1 commands the display monitor 2 to enlarge the screen size of the monitor" (column 4, lines 10-11) after "monitor control CPU ... reads data in the EEPROM 11 as non-volatile memory or the RAM 12 as a rewritable memory and transmits the data outside of the display monitor 2" (column 3, lines 60-63).

What is cited in Kanno is different from what is recited on lines 3-8 of claim 1, because the display controller in Kanno merely changes the screen size on a display screen with no mention of a screen protecting image data or "an operation mode" (claim 1, line 5). Furthermore, nothing was cited in Kanno or Vossler either combined together or taken individually that teaches or suggests "a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus" as recited in claim 1, lines 3-8.

In addition, in the Office Action it was admitted that Kanno does not teach "providing a memory unit storing screen protecting image data and said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition" (Office Action, page 3, lines 2-5).

However, the Office Action at page 3, lines 6-18 relied on Vossler in asserting that turning off a display in a screen saver mode was equivalent to "changing the operation mode of the main apparatus into a low power consumption mode" as recited in claim 1, lines 6-7. What was cited in Vossler describes an EPA Energy Star-compliant display controller that commands the display to enter a power conservation mode. Turning a display off or causing a display to enter a low power mode as described in the Office Action and attributed to Vossler is different from commanding a main frame computer to enter a low power consumption mode in association with commanding the display to enter a screen saver mode as illustrated in FIG. 4 and described in the specification at page 16, lines 3-16, because there is a significant difference in the effect of overall operation of a system in turning off a peripheral device, such as a display device, and putting a computer mainframe into a suspend mode in which little or no operations are performed.

Further, it is important to note that as illustrated in FIG. 4 and described on page 17 of Appellant's application, the screen saver mode on the display screen can be on when the CPU

and/or graphics controller are either in the normal mode (i.e., operational condition) or in the suspend mode. Therefore, the screen saver mode on the display screen can be on "irrespective of an operation mode of the main apparatus" (claim 1, lines 5-6) and described in the specification at page 16, lines 3-16 and illustrated in FIG. 4.

Nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests

a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus, said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition

(claim 1, lines 4-8). Furthermore, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive the features recited on lines 4-8 of claim 1. Further, in rejecting this portion of claim 1, the Office Action relied on the faulty relationship of equating turning off a display screen with turning off a main frame computer. The relationship is faulty because turning a display off or causing a display to enter a power conservation mode is different from commanding the main frame computer to enter a low power mode in association with commanding the display to enter a screen saver mode as illustrated in FIG. 4 and described in the specification at page 16, lines 3-16). For all of the above reasons, a *prima facie* case of obviousness was not established in the Office Action for claim 1. Thus, claim 1 is allowable.

Appealed claim 4 further defines the invention by reciting a

sub-display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on the display screen irrespective of an operation mode of the main apparatus, said sub-display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition

(claim 4, lines 11-15).

In rejecting this portion of claim 4, the Office Action cited Kanno, specifically a "monitor control unit, Fig. 1 (14) which includes a RAM (12) operable to control the screen image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus Fig. 1 (1)" (Office Action, page 5, lines 16-18). However, as stated in Kanno, "computer 1 commands the display monitor 2 to enlarge the screen size of the monitor" (column 4, lines 10-11) after "monitor control CPU ... reads data in the EEPROM 11 as non-volatile memory or the RAM 12 as a rewritable memory and transmits the data outside of the display monitor 2" (column 3, lines 60-63).

What was cited in Kanno is different from what is recited on lines 11-13 of claim 4, because the display controller in Kanno merely changes the screen size on a display screen with no mention of "a sub-display control unit operable to control the screen protecting image data stored in ... memory" (claim 4, lines 11-12) or "a low power consumption mode" (claim 4, line 14).

It is important to note that as illustrated in FIG. 4 and described on page 17 of the Appellant's application, the screen saver mode on the display screen can be on when the CPU and/or graphics controller are either in the normal mode (i.e., operational condition) or in the suspend mode (i.e., non-operational condition). Therefore, the screen saver mode on the display screen can be on "irrespective of an operation mode of the main apparatus" (claim 4, lines 12-13).

Further, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests the limitations recited on lines 11-15 of claim 4. In addition, nothing was cited or found in Kanno and Vossler that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive the limitations of Appellant's invention missing from Kanno. Furthermore, the conclusion of obviousness was reached as a result of reliance on the faulty relationship of equating turning off a display screen with turning off a main frame computer. For all of the above reasons a *prima facie* case of obviousness was not established in the Office Action for claim 4. Thus, claim 4 is allowable.

In rejecting claim 6, the Office Action cited Kanno as disclosing a "monitor control unit, Fig. 1 (14) which includes a RAM (12) operable to control the screen image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus Fig. 1 (1)" (Office Action, page 7, lines 14-17). However, in Kanno, "computer 1 commands the display monitor 2 to enlarge the screen size of the monitor" (column 4, lines 10-11) after "monitor control CPU ... reads data in the EEPROM 11 as non-volatile memory or the RAM 12 as a rewritable memory and transmits the data outside of the display monitor 2" (column 3, lines 60-63).

What was cited in Kanno is different from

a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on a display screen of the display apparatus irrespective of an operation mode of a main apparatus, said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode

(claim 6, lines 3-6), because the display controller in Kanno merely changes the screen size on a display screen with no mention of a screen protecting image data or a "low power consumption mode" (claim 6, line 6) of the main apparatus.

Further, it is important to note that as illustrated in FIG. 4 and described on page 17 of Appellant's application, the screen saver mode on the display screen can be on when the CPU and/or graphics controller are either in the normal mode (i.e., operational condition) or in the suspend mode (i.e., non-operational condition). Therefore, the screen saver mode on the display screen can be on "irrespective of an operation mode of the main apparatus" (claim 6, lines 4-5).

In addition, in the Office Action it was admitted that Kanno does not teach providing a memory unit storing screen protecting image data and said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition whereby when no access is made from the main apparatus to the display apparatus for a determined time period, an image produced from screen protecting image data is displayed on the display screen of the display apparatus (Office Action, page 7, line 18 to page 8, line 2).

However, at page 8, lines 3-16 of the Office Action, a conclusion of obviousness was reached by equating "changing the operation mode of the main apparatus into a low power consumption mode" as recited in claim 6, line 6) with turning off a display in a screen saver mode as allegedly described at column 4, line 67 to column 5, line 5 of Vossler. As discussed above, the conclusion of obviousness was reached as a result of reliance on the faulty relationship of equating turning off a display screen with turning off a main frame computer. The relationship is faulty because turning a display off or causing a display to enter a power conservation mode is different from commanding the main frame computer to enter a low power mode in association with commanding the display to enter a screen saver mode as illustrated in FIG. 4 and described in the specification at page 16, lines 3-16.

Nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests the limitations recited on lines 2-10 of claim 6. Furthermore, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive Applicant's limitations recited in claim 6 and admittedly missing from Kanno. For all of the above reasons, a *prima facie* case of obviousness was not established in the Office Action for claim 6. Thus, claim 6 is allowable.

Appealed claim 9 recites "a rewritable memory unit, separate from the random access memory and separate from the video random access memory, storing therein screen protecting image data" (claim 9, lines 5-6). The Office Action cited Kanno as teaching

a rewritable memory unit (the data stored in the non-volatile memory or the rewritable memory can be recognized at the external device (column 2, lines 37 and 38)), separate from the random access memory and separate from the video random access memory, storing thereto screen image data

(Office Action, page 10, lines 3-6, emphasis in original). As previously discussed, contrary to this statement in the Office Action what was cited in Kanno does not teach or suggest "storing therein screen protecting image data" (claim 9, line 6), because Kanno only teaches changing the screen size on a display screen with no mention of "screen protecting image data" or "an operation mode" as recited in claim 9.

In rejecting claim 9, the Office Action also cited Kanno as teaching a "monitor control unit, Fig. 1 (14) separate from the graphic controller, operable to control the screen image data stored in said rewritable memory unit to be displayed on the display screen irrespective of an operation mode of the computer main frame (computer, Fig. (1))" (Office Action, page 10, lines 7-10). What was cited in Kanno was a display monitor 2 containing a monitor control CPU 14, where the display monitor is connected to a computer 1. Nothing was cited or found in Kanno that teaches or suggests "screen protecting image data" (claim 9, lines 7-8). Furthermore, nothing was cited in Kanno that teaches or suggests "a display control unit, separate from the graphic controller, operable to control the screen protecting image data stored in said rewritable memory unit to be displayed on the display screen **irrespective of an operation mode of the computer main frame**" (claim 9, lines 7-9, emphasis added) as illustrated in FIG. 4 and described on page 17 of the specification.

The Office Action admitted that Kanno does not teach

providing a memory unit storing screen protecting image data and said display control unit transmitting a control signal, to control the operation mode of the computer main frame, to the computer main frame to instruct the computer main frame [to] not operate for a predetermined time period and said display control unit transmitting a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition

(Office Action, page 10, lines 11-17). However, the Office Action relied on faulty reasoning that equated instructing "the computer main frame to not operate for a predetermined time period" (claim 9, lines 11-12) with turning off a display in a screen saver mode as allegedly described in Vossler at column 4, line 67 and column 5, lines 1-). As discussed above, turning a display off or causing a display to enter a low power mode as described in the Office Action and

attributed to Vossler is different from instructing "the computer main frame to not operate for a predetermined time period" (claim 9, lines 11-12) because a display is not a computer main frame and turning off a display does not suggest turning off a computer main frame.

Nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests the limitation recited on lines 7-14 of claim 9. Furthermore, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive the limitations recited in claim 9 and admittedly missing from Kanno. Further, as discussed above, a conclusion of obviousness was reached as a result of reliance on the faulty reasoning of equating turning off a display screen with turning off a main frame computer. For all of the above reasons, a *prima facie* case of obviousness was not established in the Office Action for claim 9. Thus, claim 9 is allowable over the cited references.

Appealed claim 10 recites "a screen protecting data random access memory, independent from the random access memory and the video random access memory of said computer main frame, storing screen protecting image data" (claim 10, lines 6-8). The Office Action cited Kanno as teaching "a screen data random access memory independent from the random access memory and the video random access memory of said computer main frame, storing screen image data (the data stored in the non-volatile memory or the rewritable memory can be recognized at the external device (column 2, lines 37 and 38))" (Office Action, page 12, lines 1-4, emphasis in original). However, what was cited in Kanno does not teach or suggest the limitation recited on lines 6-8 of claim 10, primarily because Kanno is silent in regard to "screen protecting data" as recited in claim 10.

In rejecting claim 10, the Office Action also cited Kanno as teaching a "monitor control CPU, Fig. 1 (14) independent of the central processing unit of said computer main frame (computer, Fig. 1 (1))" (Office Action, page 12, lines 5-6). However, as discussed above, nothing was cited in Kanno that teaches or suggests

a display control unit, independent from the central processing unit of said computer main frame, operable to control the screen protecting image data stored in the screen protecting data random access memory to be displayed on the display screen irrespective of an operation mode of the computer main frame (claim 10, lines 9-12), because Kanno teaches merely changing the screen size on a display screen with no mention of a screen protecting image data or an operation mode.

Furthermore, in the Office Action it was admitted that Kanno does not teach "providing a memory unit storing screen protecting image data and memory operable to control the screen

protecting image data stored in the screen protecting data random access memory to be displayed on the display screen irrespective of the operation mode of the computer main frame, and said display control unit transmitting a control signal, for changing the operation mode of said computer main frame into a low power consumption mode under a predetermined condition and a portable computer" (Office Action, page 12, lines 7-13).

However, as discussed above, the Office Action relied on faulty reasoning that equated "changing the operation mode of said computer main frame into a low power consumption mode under a predetermined condition" (claim 10, lines 13-14) with turning off a display in a screen saver mode as described in Vossler (see the Office Action, page 12, line 14 to page 13, line 5).

Nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests the limitation recited on lines 6-14 of claim 10. Furthermore, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive Appellant's limitations recited in claim 10 and admittedly missing from Kanno. Further, as discussed above, a conclusion of obviousness was reached as a result of reliance on the faulty reasoning that equated turning off a display screen with turning off a main frame computer. For all of the above reasons, a *prima facie* case of obviousness was not established in the Office Action for claim 10. Thus, claim 10 is allowable over the cited references.

Appealed claim 14 recites "storing screen protecting image data in a screen protecting data random access memory, independent from a random access memory and a video random access memory in said computer main frame" (claim 14, lines 3-5). What was cited in Kanno describes "figure numeral 14 ... a monitor control CPU which reads data in the EEPROM 11 as a non-volatile memory or the RAM 12 as a rewritable memory and transmits the data outside of the display monitor 2" (column 3, lines 59-63) (see the Office Action, page 15, lines 5-4). This has nothing to do with storing screen protecting image data in a screen protecting data random access memory, because, as discussed above, Kanno is silent in regard to screen protecting image data.

Appealed claim 14 recites

displaying the screen protecting image data stored in the screen protecting data random access memory on the display screen irrespective of an operation mode of the computer main frame, and transmitting a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition

(claim 14, lines 6-10). The Office Action cited Kanno as teaching

displaying the screen image data stored in the screen data random access memory on the display screen irrespective of the operation mode of the computer main frame (monitor Fig. 1 (9)) from the computer where a monitor circuit which drives a display monitor to produce an image on a screen of the monitor according to a video signal inputted to the display monitor Fig. 1 (1)

(Office Action, page 15, lines 10-14, emphasis in original). What was cited in Kanno describes a display monitor FIG. 1 (9) connected via a monitor circuit 10 to a computer 1, where the monitor circuit 10 drives the monitor 9. This is different from what is recited on lines 6-8 of claim 14, because Kanno is silent with respect to displaying the screen protecting image ... irrespective of an operation mode of the computer main frame" as recited in claim 14.

In addition, in the Office Action it was admitted that Kanno does not teach "providing a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition" (Office Action, page 15, lines 15-17). However, on page 15, line 18 to page 16, line 6 of the Office Action, an attempt was made to equate "changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition" (claim 14, lines 9-10) with turning off a display in a screen saver mode as allegedly described in Vossler. As discussed above, this involves faulty reasoning because a display is not a computer main frame and turning off a display does not suggest turning off a computer main frame.

Nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests the limitation recited on lines 3-10 of claim 14. Furthermore, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive Appellant's limitations recited in claim 14 and admittedly missing from Kanno. Further, as discussed above, a conclusion of obviousness was reached as a result of reliance on faulty reasoning that equated turning off a display screen with turning off a main frame computer. For all of the above reasons, a *prima facie* case of obviousness was not established in the Office Action for claim 14. Thus, claim 14 is allowable over the cited references.

Appealed claim 20 recites "a memory storing screen protecting image data" (claim 20, line 3). As discussed above, what was cited in Kanno is different from what is recited on line 3 of claim 20, because the display controller in Kanno merely changes the screen size on a display screen.

Claim 20 recites "transmitting a control signal to the data processing device to place the data processing device in an energy saver mode under a predetermined condition" (claim 20,

lines 5-7). At page 19, lines 13-15 of the Office Action it was admitted that Kanno does not teach this limitation. However, the Office Action relied on faulty reasoning that equated "transmitting a control signal to the data processing device to place the data processing device in an energy saver mode under a predetermined condition" (claim 20, lines 5-6) with turning off a display in a screen saver mode as allegedly described in Vossler, (see the Office Action, page 15, line 18 to page 16, line 6). The term "data processing device" is used in the specification in a manner consistent with conventional use in the computer art to refer to a device that does more than merely display data. Thus, teaching that a display device is turned off does not suggest turning off a data processing device as recited in claim 20.

Nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests the limitation recited on lines 3-7 of claim 20. Furthermore, nothing was cited or found in Kanno and Vossler either combined together or taken individually that teaches or suggests motivation to combine Vossler with Kanno or to modify Kanno to derive the limitations recited in claim 20 that were admitted to be missing from Kanno. Further, a conclusion of obviousness was reached as a result of reliance on faulty reasoning that equated turning off a display screen with turning off a data processing device. For all of the above reasons, a *prima facie* case of obviousness was not established in the Office Action for claim 20. Thus, claim 20 is allowable over the cited references.

Furthermore, dependent claims 2, 3, 5, 7, 8, 11-13, 16-19 and 21 distinguish over the applied art for at least the reasons discussed in regard to claims 1, 4, 6, 9, 10, 14 and 20.

Summary of Arguments

For the reasons set forth above and in the Amendment filed September 28, 2005, it is submitted that claims 1-21 patentably distinguish over Kanno and Vossler. Thus, it is respectfully submitted that the Examiner's final rejection of the claims is without support and, therefore, erroneous. Accordingly, the Board of Patent Appeals and Interferences is respectfully urged to so find and to reverse the Examiner's rejection.

A Petition for a four-month extension of time, together with a check for the requisite fees of \$1,590 for the extension of time and \$500 for the Appeal Brief, are attached. If any additional fees are required, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

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STAAS & HALSEY
By: Jean L. Young
Date: November 9, 2006

VIII. Claims Appendix

1. A display apparatus, comprising:
 - a display screen displaying thereon image data sent from a main apparatus;
 - a memory unit storing thereinto screen protecting image data; and
 - a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on said display screen irrespective of an operation mode of the main apparatus, said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition.
2. The display apparatus of claim 1, wherein:
 - said memory unit is a data rewritable memory, and the image protecting data is written into said memory unit from the main apparatus.
3. The display apparatus of claim 1, wherein:
 - said display control unit provided on the side of said display apparatus comprises a main apparatus control unit transmitting a control signal, to control the operation mode of the main apparatus, to the main apparatus under such a condition that the main apparatus is not actually operated for a predetermined time period.
4. An information processing system, comprising:
 - a main apparatus processing image data; and
 - a display apparatus displaying the image data sent from said main apparatus on a display screen; wherein:
 - said main apparatus includes:
 - an image data storage unit storing image data to be displayed; and
 - a main display control unit causing the image data stored in the image data storage unit to be displayed on the display screen; and
 - said display apparatus includes:
 - a memory unit storing thereinto screen protecting image data; and
 - a sub-display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on the display screen irrespective of an operation mode of the main apparatus, said sub-display control unit transmitting a control signal for changing the

operation mode of the main apparatus into a low power consumption mode under a predetermined condition.

5. The image processing apparatus of claim 4, wherein:

said main apparatus further comprises an operation mode control unit changing a normal power consumption mode of said main apparatus into a low power consumption mode;

said display apparatus further comprises a main apparatus control unit transmitting a control signal, to control the operating mode of the main apparatus, to said main apparatus under such a condition that said main apparatus is not actually operated for a predetermined time period; and

upon receipt of the control signal transmitted from said main apparatus control unit, the operation mode control unit changes the normal power consumption mode into the low power consumption mode.

6. A display apparatus, comprising:

a memory unit storing therein screen protecting data; and

a display control unit operable to control the screen protecting image data stored in said memory unit to be displayed on a display screen of the display apparatus irrespective of an operation mode of a main apparatus, said display control unit transmitting a control signal for changing the operation mode of the main apparatus into a low power consumption mode under a predetermined condition,

whereby when no access is made from the main apparatus to the display apparatus for a predetermined time period, an image produced from screen protecting image data is displayed on the display screen of the display apparatus.

7. The display control apparatus of claim 6, wherein:

said memory unit is a data rewritable memory, and the image protecting data is written into the memory unit from the main apparatus.

8. The display control apparatus of claim 6, further comprising:

a main apparatus control unit transmitting a control signal, to control the operation mode of the main apparatus, to the main apparatus under such a condition that the main apparatus is not actually operated for the predetermined time period.

9. A display apparatus, comprising:

a display screen displaying thereon image data sent from a computer main frame, the computer main frame including a central processing unit, random access memory, a graphic controller and video random access memory;

a rewritable memory unit, separate from the random access memory and separate from the video random access memory, storing therein screen protecting image data; and

a display control unit, separate from the graphic controller, operable to control the screen protecting image data stored in said rewritable memory unit to be displayed on the display screen irrespective of an operation mode of the computer main frame, said display control unit transmitting a control signal, to control the operation mode of the computer main frame, to the computer main frame to instruct the computer main frame to not operate for a predetermined time period, and said display control unit transmitting a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition.

10. A display system for a portable computer, comprising:

a computer main frame including a central processing unit, a graphic controller, random access memory, and video random access memory; and

a display apparatus including:

a display screen displaying thereon image data sent from said computer main frame,

a screen protecting data random access memory, independent from the random access memory and the video random access memory of said computer main frame, storing screen protecting image data, and

a display control unit, independent from the central processing unit of said computer main frame, operable to control the screen protecting image data stored in the screen protecting data random access memory to be displayed on the display screen irrespective of an operation mode of the computer main frame, and said display control unit transmitting a control signal for changing the operation mode of said computer main frame into a low power consumption mode under a predetermined condition

11. The display system of claim 10, wherein the display control unit changes from a normal power consumption mode into a low power consumption mode then provides a signal, to control an operation mode of the computer main frame, to the computer main frame instructing the computer main frame to enter a low power consumption mode.

12. The display system of claim 11, wherein the screen protecting image data is a screen saving program.

13. The display system of claim 10, wherein the screen protecting image data is a screen saving program.

14. A method of controlling a display apparatus, comprising:
displaying image data on a display screen sent from a computer main frame,
storing screen protecting image data in a screen protecting data random access memory, independent from a random access memory and a video random access memory in said computer main frame,
displaying the screen protecting image data stored in the screen protecting data random access memory on the display screen irrespective of an operation mode of the computer main frame, and
transmitting a control signal for changing the operation mode of the computer main frame into a low power consumption mode under a predetermined condition.

15. The display apparatus of claim 1, wherein the a display control unit is operable to control the screen protecting image data to be displayed on said display screen based on the operation mode of the main apparatus.

16. The image processing apparatus of claim 4, wherein the sub-display control unit is operable to control the screen protecting image data to be displayed on the display screen based on the operation mode of a main apparatus.

17. The display apparatus of claim 9, wherein the display control unit is operable to control the screen protecting image data to be displayed on the display screen based on the operation mode of the computer main frame.

18. The display system of claim 10, wherein the display control unit is operable to control the screen protecting image data to be displayed on the display screen based on the operation mode of the computer main frame.

19. The method of claim 14, further comprising:
displaying the screen protecting image data on the display screen based on the operation mode of the computer main frame.
20. A display apparatus for a data processing device, comprising:
a display screen displaying image data;
a memory storing screen protecting image data; and
a display controller causing the screen protecting image data stored in said memory unit to be displayed on said display screen, and transmitting a control signal to the data processing device to place the data processing device in an energy saver mode under a predetermined condition.
21. The display apparatus of claim 20, wherein the predetermined condition is that the data processing device is not activated by a user for a predetermined period of time.

IX. Evidence Appendix

(None)

X. Related Proceedings Appendix

(None)